CGIAR

RESEARCH PROGRAM ON Livestock

1 NO POVERTY

More meat, milk and eggs by and for the poor

Livestock feeds and forages flagship

Key messages

- Quantity and quality of livestock feed is a key limitation to sustainable livestock production in the tropics.
- Superior feeds/forages improve livelihoods while reducing negative environmental impacts.
- Feeds/forages work involves diagnosing constraints/ opportunities, developing novel feed/forage options and assessing ways of using existing resources better.
- Work spans the discovery to delivery continuum.

Livestock-based solutions

The Feeds and Forages Flagship is organized in 4 clusters:

1. Diagnosis of feed constraints/opportunities and development of decision-support tools for prioritizing and targeting feed and forage interventions.
2. Facilitating the delivery and uptake of feeds/forages.
3. Using existing feed resources better.
4. Development of feeds and forages options.

Multiplier effects

- Development of learning materials on smart feed interventions that can be applied at scale (e.g. FEAST).
- Knowledge tool for forage selection (SoFT) with 300,000 users annually.
- Open access journal *Tropical Grasslands-Forrajes Tropicales* with 90,000 users annually.
- Seed production and dissemination through private sector for food-feed crops and selected forage grasses.
- Incorporation of feed traits into cereal and grain legume breeding with wide-spread impacts on feed availability and quality.
- Pilot to scaling approaches to be studied with improved forages, rangeland and food-feed crops.
- Critical points for moving from pilot to scale: seed systems, institutions, capacity development.

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Results and evidence from the Livestock and Fish CGIAR research program (2012–16)

- There are over 200 million ha of improved forages planted across the tropics, with *Brachiaria* spp., *Panicum maximum* spp. and *Pennisetum* spp. the most widely distributed.
- *Brachiaria* hybrids bred are now planted on over 700,000 ha in 35 countries.
- Enhanced productivity and quality of forages combines with reduced GHG emissions and improved carbon balance.
- Research in India has shown that improved sorghum residue, combined with feed fortification, could more than triple average daily milk yields from 5 to 15 litres per animal.
- Stover from pipeline maize hybrids specifically bred for grainyield and stover fodder quality can raise this to 20 litres.
- Genotypes that combine superior grain yield and straw traits have been identified in lentil, chickpea and faba bean. The potential exploitable genotypic range in nutritive parameters was greater that the improvements due to conventional treatments.
- Ethiopian highland sheep breeds show positive but variable fattening responses to supplementation.
- Cactus can be used as supplementary feed during feed gap and locally produced manual cactus choppers reduce work load for women.
- Seed and feed processing creates job opportunities, e.g. pellets, feed blocks, concentrates, mash, silage and hay.

7th Multi-Stakeholder Partnership Meeting Achieving multiple benefits through livestock-based solutions, Addis Ababa, 8-12 May 2017.

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